IT IS CLAIMED:

1. A packet fiber node for use in an access network, the access network including a Head End and a plurality of nodes, the packet fiber node comprising:

at least one processor;

memory;

a first interface for communicating with the Head End; and

a second interface for communicating with at least a portion of the plurality of network nodes;

the packet fiber node being configured or designed to communicate with the Head End using baseband optical signals.

2. The packet fiber node of claim 1 wherein the packet fiber node is not adapted to communicate with the Head End using frequency modulated optical signals.

3. The packet fiber node of claim 1 wherein the packet fiber node is configured or designed to communicate with the Head End using only baseband optical signals.

4. The packet fiber node of claim 1 wherein the packet fiber node is further configured or designed to communicate with at least a portion of the cable modems using modulated electrical signals generated in accordance with a standardized DOCSIS protocol.

5. The packet fiber node of claim 1 wherein the access network corresponds to a cable network implemented in accordance with a standardized DOCSIS protocol;

the packet fiber node being further configured or designed to perform functions relating to DOCSIS MAC scheduling operations.

6. The packet fiber node of claim 1 wherein the access network corresponds to a cable network;

the packet fiber node being further configured or designed to handle layer 1 and layer 2 functionality.

7. The packet fiber node of claim 1 wherein the access network corresponds to a cable network, and wherein the network nodes correspond to cable modems, the cable network including a first RF fiber node adapted to communicate with the Head End using frequency modulated optical signals, the first RF fiber node further being adapted to service a first group of cable modems and a second group of cable modems;

the cable network further including a first packet fiber node and a second packet fiber node, each packet fiber node being adapted to communicate with the Head End using baseband optical signals;

the first packet fiber node being adapted to service the first group of cable modems;

the second packet fiber node being adapted to service the second group of cable modems.

8. The packet fiber node of claim 1 wherein the access network corresponds to a cable network, and wherein the network nodes correspond to cable modems;

the packet fiber node being further configured or designed to receive IP packets from a portion of the cable modems; and

wherein the packet fiber node is further configured or designed to transmit the received IP packets to the Head End using a tunneling protocol.

9. The packet fiber node of claim 1 wherein the access network corresponds to a cable network, and wherein the network nodes correspond to cable modems;

the packet fiber node being further configured or designed to receive IP packets from a portion of the cable modems; and

wherein the packet fiber node is further configured or designed to transmit the received IP packets to the Head End using an IP protocol.

10. A packet fiber node for use in an access network, the access network including a Head End and a plurality of nodes, the packet fiber node comprising:

a diplexor;

at least one interface; and

a distributed cable modem termination system (DCMTS), the DCMTS being configured to communicate with the Head End using baseband optical signals;

wherein the packet fiber node is adapted to communicate with the Head End using frequency modulated optical signals.

11. The packet fiber node of claim 10 wherein the packet fiber node is not adapted to communicate with the Head End using frequency modulated optical signals.

12. The packet fiber node of claim 10 wherein the packet fiber node is configured or designed to communicate with the Head End using only baseband optical signals.

13. The packet fiber node of claim 10 wherein the packet fiber node is further configured or designed to communicate with at least a portion of the cable modems using modulated electrical signals generated in accordance with a standardized DOCSIS protocol.

14. The packet fiber node of claim 10 wherein the access network corresponds to a cable network implemented in accordance with a standardized DOCSIS protocol;

the packet fiber node being further configured or designed to perform functions relating to DOCSIS MAC scheduling operations.

15. The packet fiber node of claim 10 wherein the access network corresponds to a cable network;

the packet fiber node being further configured or designed to handle layer 1 and layer 2 functionality.

16. The packet fiber node of claim 10 wherein the access network corresponds to a cable network, and wherein the network nodes correspond to cable modems, the cable network including a first RF fiber node adapted to communicate with the Head End using frequency modulated optical signals, the first RF fiber node further being adapted to service a first group of cable modems and a second group of cable modems;

the cable network further including a first packet fiber node and a second packet fiber node, each packet fiber node being adapted to communicate with the Head End using baseband optical signals;

the first packet fiber node being adapted to service the first group of cable modems;

the second packet fiber node being adapted to service the second group of cable modems.

17. The packet fiber node of claim 10 wherein the access network corresponds to a cable network, and wherein the network nodes correspond to cable modems;

the packet fiber node being further configured or designed to receive IP packets from a portion of the cable modems; and

wherein the packet fiber node is further configured or designed to transmit the received IP packets to the Head End using a tunneling protocol.

18. The packet fiber node of claim 10 wherein the access network corresponds to a cable network, and wherein the network nodes correspond to cable modems;

the packet fiber node being further configured or designed to receive IP packets from a portion of the cable modems; and

wherein the packet fiber node is further configured or designed to transmit the received IP packets to the Head End using an IP protocol.

19. A method for performing communication in a cable network, the cable network including a Head End which communicates with a plurality of different cable modem groups using at least one upstream channel and at least one downstream channel, the method comprising using a same channel frequency to communicate with at least two different cable modem groups which are serviced by a common RF fiber node;

wherein the RF fiber node is adapted to communicate with the Head End using frequency modulated optical signals.

20. The method of claim 19 further comprising:

transmitting a first portion of information to a first group of cable modems, the first group of cable modems being configured to communicated with a first RF fiber node;

the first portion of information being transmitted to the first group of cable modems using a first downstream channel frequency; and

transmitting a second portion of information to a second group of cable modems, the second group of cable modems being configured to communicated with the first RF fiber node;

the second portion of information being transmitted to the second group of cable modems using the first downstream channel frequency.

21. The method of claim 20 further comprising:

transmitting the first portion of information from a first packet fiber node to the first group of cable modems; and

transmitting the second portion of information from a second packet fiber node to the second group of cable modems.

22. The method of claim 21 further comprising communicating information between the packet fiber nodes and the Head End using at least one baseband optical signal.

23. A packet fiber node for use in a cable network, the cable network including a Head End and a plurality of cable modems, the packet fiber node comprising:

first means for communicating with at least a portion of the cable modems; and

second means for communicating with the Head End using baseband optical signals.

24. The packet fiber node of claim 23 wherein the packet fiber node is not adapted to communicate with the Head End using frequency modulated optical signals.

25. The packet fiber node of claim 23 wherein the second means includes means for communicating with the Head End using only baseband optical signals.

26. The packet fiber node of claim 23 further comprising means for communicating with at least a portion of the cable modems using modulated electrical signals generated in accordance with a standardized DOCSIS protocol.

27. The packet fiber node of claim 23 further comprising means for performing functions relating to DOCSIS MAC scheduling operations.

28. The packet fiber node of claim 23 further comprising means for performing functions relating layer 1 and layer 2 functionality.

29. The packet fiber node of claim 23 further comprising:

means for receiving IP packets from a portion of the cable modems; and

means for transmitting the received IP packets to the Head End using a tunneling protocol.

30. The packet fiber node of claim 23 further comprising:

means for receiving IP packets from a portion of the cable modems; and

means for transmitting the received IP packets to the Head End using an IP protocol.